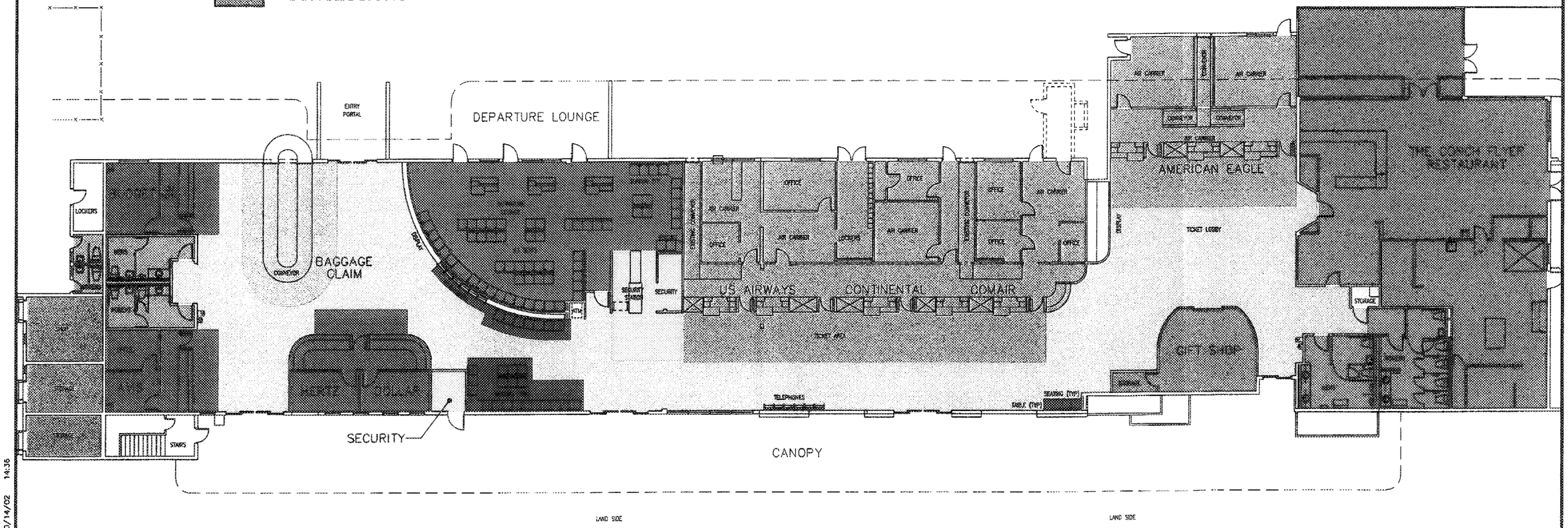
LEGEND

- CIRCULATION
- AIRLINE SPACE
- DEPARTURE LOUNGE
- BAGGAGE CLAIM
- CONCESSIONS
- SEATING AREAS
- RESTROOMS
- SECURITY
- RENTAL CARS



N

20 0 20

GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

PASSENGER TERMINAL (FIRST FLOOR LAYOUT)

Key West International Airport
Master Plan Update

FIGURE: 1.4

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CAPE AIR ANNEX

FIS BUILDING

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CAPE AIR ANNEX AND FIS BUILDING

FIGURE: 1.5

GRAPHICS\KEYWEST\MPUPDATE2001_FIG-1-5.AI

1.3.2.5 Individual Aircraft Storage Hangars

There are 11 individual aircraft storage hangars. Three hangars are owned by the county and leased to individual aircraft owners. Eight hangars are privately owned and are on land leased from the airport. All of these building are in extremely poor condition.

1.3.2.6 Aircraft Rescue and Firefighting (ARFF) Building

A new ARFF facility was constructed adjacent to the west end of the passenger terminal and became operational in 2001. This facility, shown in Figure 1.6, provides 3 bays for firefighting vehicles and equipment. The ARFF station is presently equipped to meet the requirements of Index B (please see Section 3.6 for a description of Indexes). Vehicles in the facility consist of a 1999 Oshkosh T-1500. This vehicle has a 1,500-gallon water capacity and a 210-gallon foam capacity. In addition, the facility has a GMC rapid response vehicle and one other pick-up truck shown in Figure 1.7. A water rescue boat and equipment was acquired in 2002.

1.3.2.7 Air Traffic Control Tower (ATCT)

The airport's air traffic control tower is shown in Figure 1.8 and is located west of the ARFF station. The station was constructed in 1972 and was refurbished in the 1990s. Visibility of airport operational areas and runway approaches is good. The tower is operational 7:00 a.m. through 9:00 p.m.

1.3.2.8 FedEx Cargo Building

The 3,000-square-foot cargo building is occupied by FedEx overnight parcel services. The concrete block structure is owned by the airport and is in good condition.

1.3.2.9 Rental Car Facilities

Avis car rental occupies an approximately 1,180-square-foot building for cleaning vehicles on a lot of approximately 0.7 acre in size leased from the airport. Dollar car rental occupies an approximately 950-square-foot building on a lot of approximately 0.6 acre in size leased from the airport. These facilities are shown in Figure 1.9.

1.3.2.10 Highway Patrol

The Florida State Highway Patrol leases a building of approximately 3,780 square feet located on airport property with direct access to Roosevelt Boulevard. The building is owned by the airport and was renovated in 2002. The building is currently being used by the Drivers License Bureau.

1.3.2.11 Teenage Center of Key West

The Teenage Center of Key West occupies a building of approximately 4,200 square feet located on airport property with access from Roosevelt Boulevard. The building is owned by the airport and is in fair condition.

1.3.2.12 Island Aeroplane Tours

Island Aeroplane tours occupies an approximately 400-square-foot wood frame building in fair condition. Island Aeroplane Tours also occupies an approximately 320-square-foot mobile home type building in fair condition. Both of these buildings are on land leased from the airport.

1.3.2.13 Monroe County Department of Public Works

The Monroe County Department of Public Works owns and occupies approximately 10 buildings on approximately 1.6 acres of airport property located on the eastern edge of the airport building area. The Department of Public Works pays the airport fair market value rent for the occupied property.

1.3.2.14 East Martello Museum and Garden

The East Martello Museum and Garden occupies approximately 3.3 acres of airport property along South Roosevelt Boulevard between the airport entrance and exit. The museum consists of a battery built in 1862 by the U.S. Army to protect Fort Zachary Taylor from Confederate attack. The site is listed on the National Register of Historic Places.

1.3.2.15 Roads and Parking

Access to EYW is provided via Roosevelt Boulevard (U.S. Highway 1). Roosevelt Boulevard is a 4-lane undivided Federal Highway. There are no dedicated turn lanes for entering or leaving airport properties. Access on airport property is provided via Faraldo Circle, a two-lane, one-way facility that connects the airport to South Roosevelt Boulevard and provides access to the public parking, the passenger terminal, rental car lots and general aviation facilities. In addition to Faraldo Circle, access to the rental car ready lots, the Department of Public Works and air cargo is provided via Stickney Road which also connects to South Roosevelt Boulevard. Stickney Road is a 2-lane, 2-way asphalt road in fair to poor condition. The FBO and GA apron area access is from Faraldo Circle west of the passenger terminal. This area has been subject to some flooding and a project to alleviate that flooding has been designed.

The public parking lot provides a total of 439 spaces. Of these, 31 spaces are devoted to short- term parking, 280 spaces are devoted to long-term car parking and 128 are devoted to rental car ready/return spaces. There are also a few spaces dedicated to tenant managers. The parking lot was resurfaced in 2002 and is in good condition. An additional employee parking lot was constructed in 2002 on the west side of Faraldo Circle. This lot provides parking for 92 vehicles.

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ARFF FACILITY

FIGURE: 1.6

GRAPHICS\KEYWEST\MPUPDATE2001_FIG-1-5.AI

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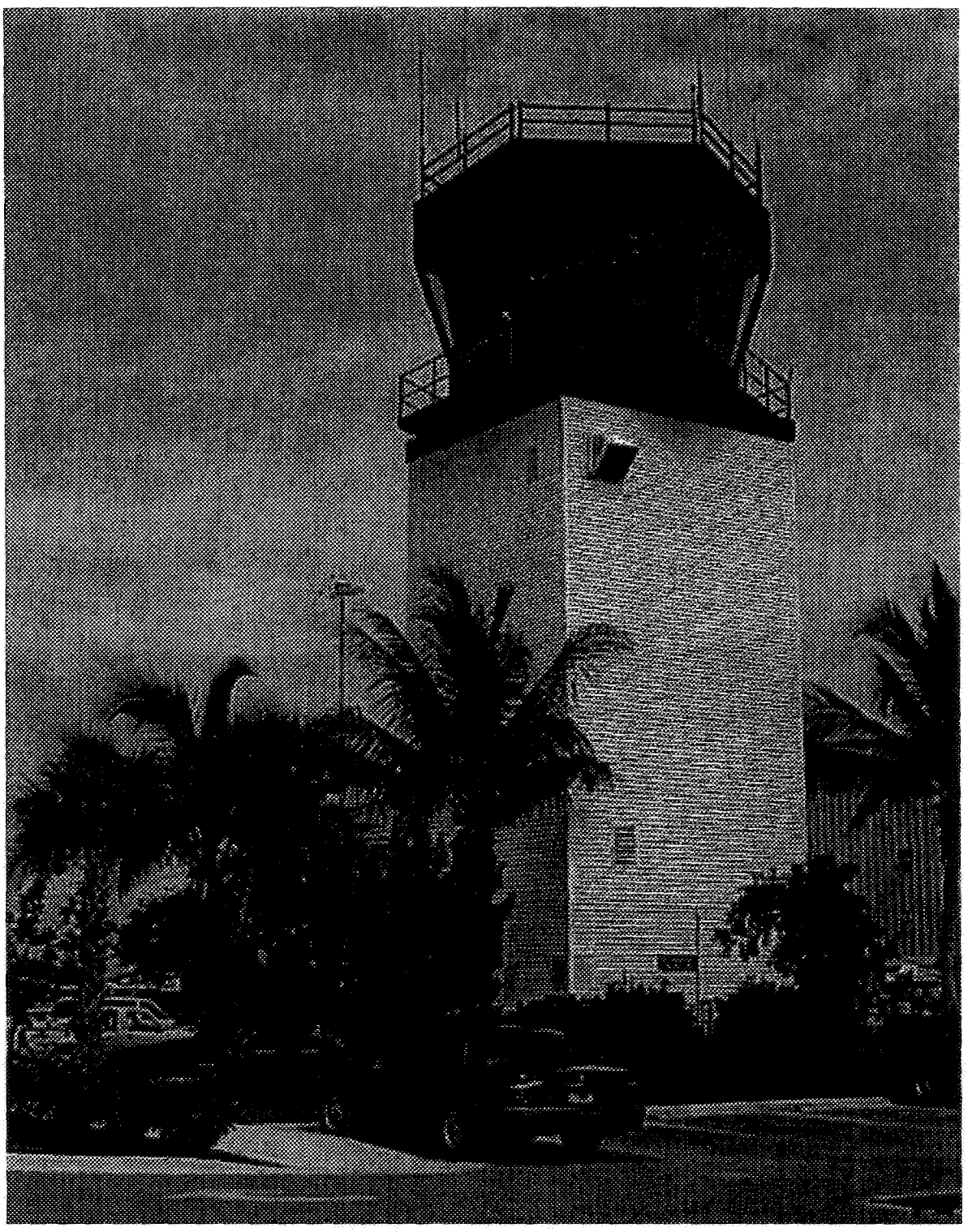
ARFF VEHICLES

FIGURE: 1.7

GRAPHICS\KEYWEST\MPUPDATE2001_FIG-1-7.AI



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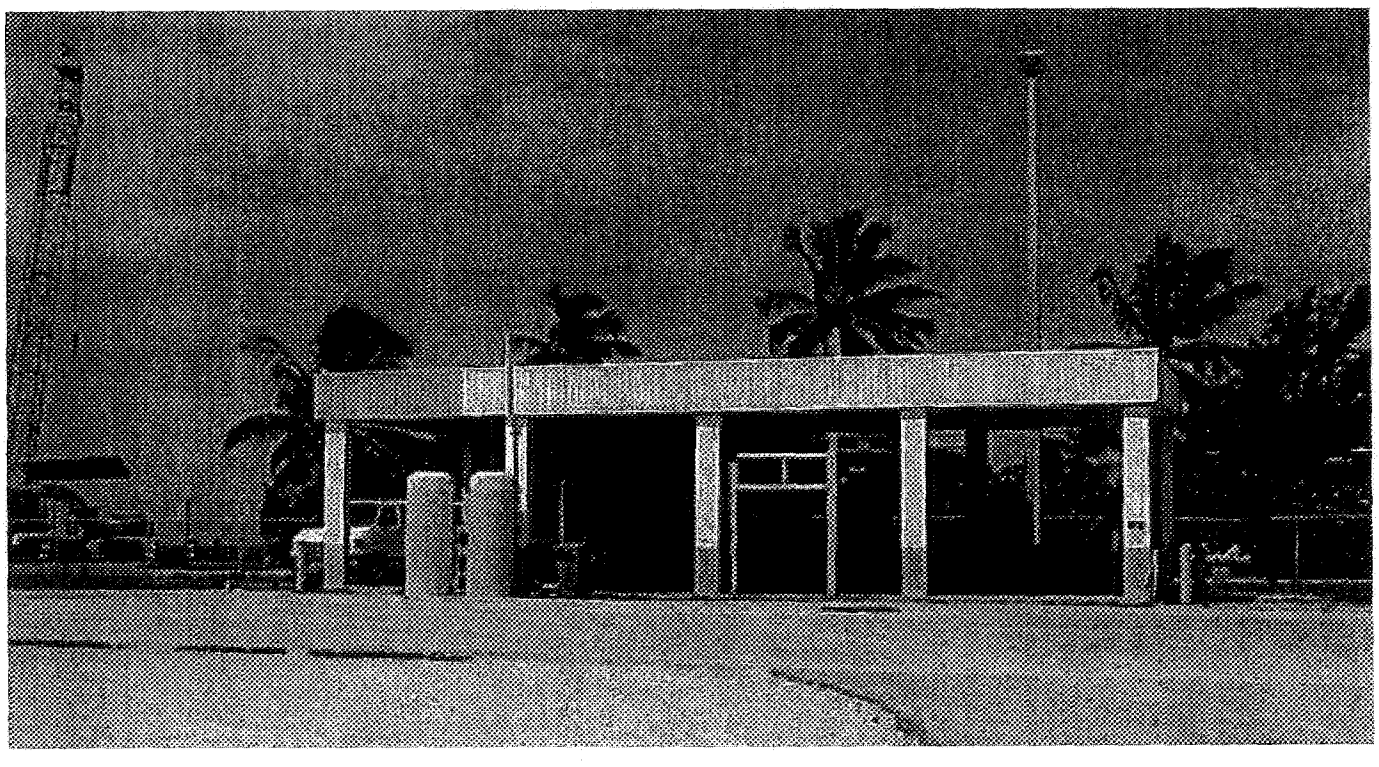
AIR TRAFFIC CONTROL TOWER

FIGURE: 1.8

GRAPHICS\KEYWEST\MPUPDATE2001_FIG-1-5.AI

AVIS FACILITY

DOLLAR FACILITY



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RENTAL CAR FACILITY

FIGURE: 1.9

GRAPHICS\KEYWEST\MPUPDATE2001_FIG-1-9.AI

Parking for official vehicles at the fire station and air traffic control tower is provided south and west of the ARFF building. The access to that parking area is from Faraldo Circle. This parking is paved and is in good condition.

Parking for the FBO is provided in a paved parking lot just south of the FBO building and hangar. The condition of this parking lot is fair, but is subject to flooding that will be addressed by a planned project. Overflow parking in this area is provided across the access road adjacent to the fuel farm. Parking in this area is not paved.

1.3.2.16 National Weather Service (NWS) Upper Air Inflation Building

A NWS Upper Air Inflation Building is located adjacent to the Runway 27 threshold. It is in a concrete block structure approximately 100 square feet in area plus a covered storage area of approximately 100 square feet in area.

1.3.2.17 Automated Surface Observation System (ASOS)

An ASOS is located adjacent to the Runway 27 threshold and the NWS Upper Air Inflation Building.

1.4 METEOROLOGICAL DATA

Weather conditions play an important role in determining an airport's capacity and facility requirements. Items of interest are temperature and precipitation, ceiling and visibility, as well as local wind conditions. Temperature information will be used to determine runway length requirements, while precipitation, ceiling, and visibility data will be used to determine the capacity of the existing airfield. Wind data will be used to determine the need for any additional runways.

Temperature and precipitation conditions at EYW were analyzed using the National Oceanic and Atmospheric Administration's "Climatography of the United States Report No. 81 for the State of Florida," which encompasses the period from 1961 to 1990. Wind and ceiling/visibility conditions at EYW were analyzed using hourly observations collected by the National Climatic Data Center for the period January 1991 through December 2000.

1.4.1 TEMPERATURE AND PRECIPITATION

The normal maximum mean temperatures at EYW range from a low of 74.8 degrees Fahrenheit (°F) in January to 89.2 °F in August, the hottest month of the year. On an annual basis, the normal mean maximum temperature averages 82.5 °F. In comparison, the normal mean minimum temperature ranges from 65.0 °F to 79.6 °F for the months of January and July, respectively. The annual average normal mean minimum temperature is 77.8 °F.

Key West is located in south end of Florida peninsula. Hurricanes periodically pass through during June to November. March is the driest month with a normal rainfall of 1.71 inches, while September

is the wettest month with a normal rainfall of 5.85 inches. The normal annual precipitation at EYW is 40 inches. Approximately 50 percent of the annual rainfall occurs during the wet season of July through October.

1.4.2 CEILING AND VISIBILITY

The FAA has defined certain limits of ceiling height and visibility limits as visual meteorological conditions (VMC) and instrument meteorological conditions (IMC). These limits affect flight operations by establishing certain rules and procedures for pilots, aircraft and air traffic control. During VMC, pilots must adhere to visual flight rules. During IMC, pilots must adhere to instrument flight rules.

VMC is defined as that period when the ceiling is greater than 1,000 feet and the visibility is greater than 3 miles. IMC is defined as that period when the ceiling and visibility is less than 1,000 and/or 3 miles, but greater than 500 feet and 1.0 mile.

Table 1.1 presents the percent occurrence for various ceiling and visibility conditions. As the table indicates, EYW experienced VMC conditions 99.2 percent of the time, IMC conditions 0.6 percent of the time, and weather conditions below the airport's approach minimums approximately 0.2 percent of the time.

TABLE 1.1
CEILING AND VISIBILITY CONDITIONS
Key West International Airport
Master Plan Update

Conditions	Ceiling and Visibility Limits	Percent Occurrence
VMC[1]	>1,000 feet and >3 miles	99.20%
IMC[2]	<1,000 feet and/or <3 miles but >500 feet and >1.0 mile	0.60%
Below Approach Minimums	<500 feet and/or <1.0 mile	0.20%
All Conditions		100.00%

Notes: [1]VMC – Visual Meteorological Conditions
[2] IMC – Instrument Meteorological Conditions
Source: U.S. Department of Commerce
National Climatic Data Center, Weather Station 72201, Key West, Florida (Data Period 1991-2000).

Compiled by URS Corporation, 2001.

1.4.3 WIND ANALYSIS

Winds in the vicinity of EYW are predominantly from the northeast and southeast. Figures 1.10 through 1.12 illustrate the percentage of observations, by direction, during all-weather, VMC, and IMC conditions. As the figures indicate, winds are primarily from the northeast and southeast.

In addition to annual wind conditions, monthly wind conditions at EYW were examined. Figure 1.13 provides an illustration of all-weather winds by month. It should be noted that there is little variation in the direction of the winds from month to month. Winds remain from the northeast and the southeast every month. During the month of February, winds are variable from north, northeast and southeast.

An analysis of the wind coverage provided by the existing runway system is provided in Table 1.2. Wind coverage indicates the percentage of time that crosswind components are within an acceptable velocity. For the purpose of runway wind analyses, a crosswind component can be defined as the wind that occurs at a right angle to the runway centerline. Crosswind components of 10.5, 13, and 16 knots were used for analyzing the runway system at EYW. These components were used because they are the velocities specified for runway having reference codes up to D-III (the issue of airport reference codes is discussed in Section 3.2.3). The wind roses for all-weather conditions, VMC, and IMC are presented in Figures 1.14, 1.15 and 1.16 respectively.

TABLE 1.2
WIND COVERAGE ANALYSIS
Key West International Airport
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Weather Category	Runway	Wind Coverage Crosswind Component		
		10.5 Knots	13 Knots	16 Knots
All-Weather	9/27	86.87%	93.32%	98.19%
VMC[1]	9/27	87.05%	93.46%	98.27%
IMC[2]	9/27	63.53%	75.45%	88.38%

Notes: [1]VMC – Visual Meteorological Conditions
[2] IMC – Instrument Meteorological Conditions
Source: U.S. Department of Commerce
National Climatic Data Center, Weather Station 72201, Key West, Florida (Data Period 1991-2000).

Compiled by URS Corporation, 2001.

FAA guidelines recommend that an airport's runway system provide wind coverage of 95 percent. If wind coverage is less than 95 percent, FAA guidelines recommend that the construction of additional runways be considered. The all-weather wind rose indicates that Runway 9/27 at EYW provides wind coverage of less than 95 percent with a 10.5-knot crosswind component, although coverage of more than 95 percent is provided at higher crosswind components. While additional runways are eligible for consideration under FAA guidelines, additional runways at EYW are not feasible due to site constraints.

1.5 AIRSPACE/AIR TRAFFIC CONTROL PROCEDURES

Airport facilities, in-flight services, obstructions, and restricted airspace associated with an aircraft in flight were considered in the airspace inventory. Factors inventoried included neighboring public and private airports, civil and military flight corridors, navigational and visual aids applicable to EYW, military restricted and operational areas, landing approaches to the airport, and known obstructions that affect approaches to the airport. Airspace features that occur within 25 nautical miles (NM) of EYW are listed and described as follows.

1.5.1 NEIGHBORING AIRPORTS

Airports within 25 NM of EYW on the Miami Sectional Aeronautical Chart published by the National Oceanic and Atmospheric Administration are listed in Table 1.3. The closest of these airports are Chalk Seaplane Base, 2.7 NM northwest (281 degrees) and NAF Key West, 4.1 NM northeast (68 degrees). They are within EYW controlled airspace.

TABLE 1.3
AIRPORTS WITHIN 25 MILES
Key West International Airport
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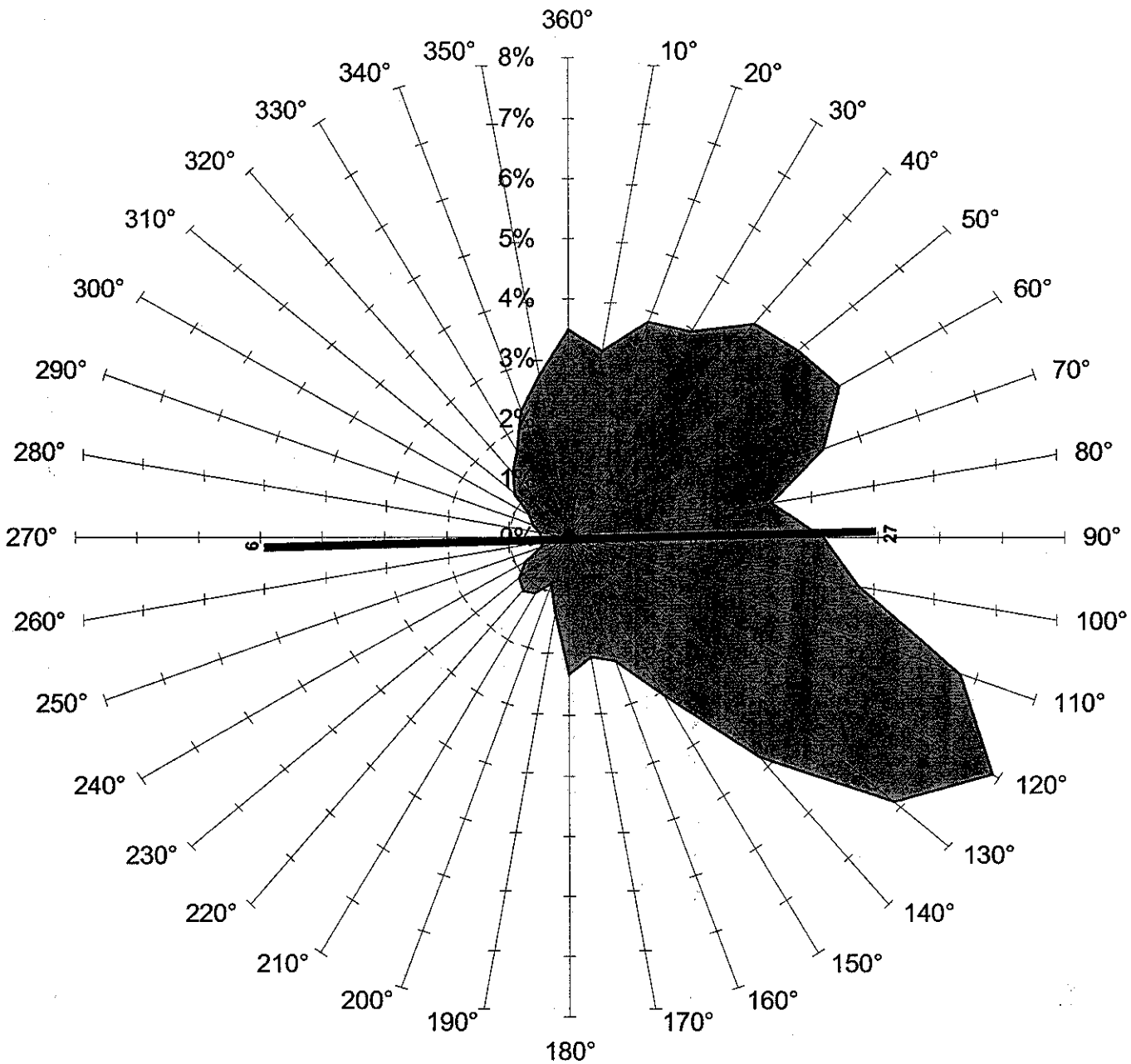
Airport Name	Airport Ownership	Distance and Direction from EYW	
		Distance (NM)	Direction (Degrees)
Chalk (Seaplane Base)	Private	2.7	281
Gulf of Mexico (Seaplane Base)	Private	2	359
NAF Key West	U.S. Navy	3	68
Sugar Loaf Shores	Private	11	58
Summerland Key	Private	18	70

Source: Miami Sectional Chart, February 2001.
Compiled by URS Corporation, 2001.

1.5.2 OPERATIONAL PROCEDURES

Operational procedures within EYW airspace are subject to certain conditions due to the close proximity of NAF Key West. EYW and NAF Key West airspace adjoins each other. Operations within the two airspaces are coordinated by the NAF Key West air traffic control tower (ATCT) and radar approach/departure control personnel. Aircraft landing at EYW are handed off to EYW ATCT personnel once their destination is known and there is no conflict with other traffic. Operating characteristics within the airspaces are as follows:

- **Adjoining Airspace** - A line of demarcation has been established to define areas of operation in the adjoining airspace as depicted in Figure 1.17.
  - **VFR Conditions** - Under VFR conditions, civil aircraft operating west of the line are required to make a left turn following takeoff from EYW Runway 9. Military aircraft stay east of the line by making their approaches



Source: NOAA National Climatic Data Center, Ashville, N.C.
Station: 72201 Key West, Florida
Period of Record: 1991-2000
Compiled by URS Corporation, 2001

Wind Data depicted relative to true north (NAD 83)
Runway 9 Orientation: 89°23' 26"
Runway 27 Orientation: 269°23' 48"

Notes:

This graphic depicts the percentage of time that the wind was recorded as occurring from each compass heading (excluding calm conditions) during the period 1991 to 2000.

Key West International Airport
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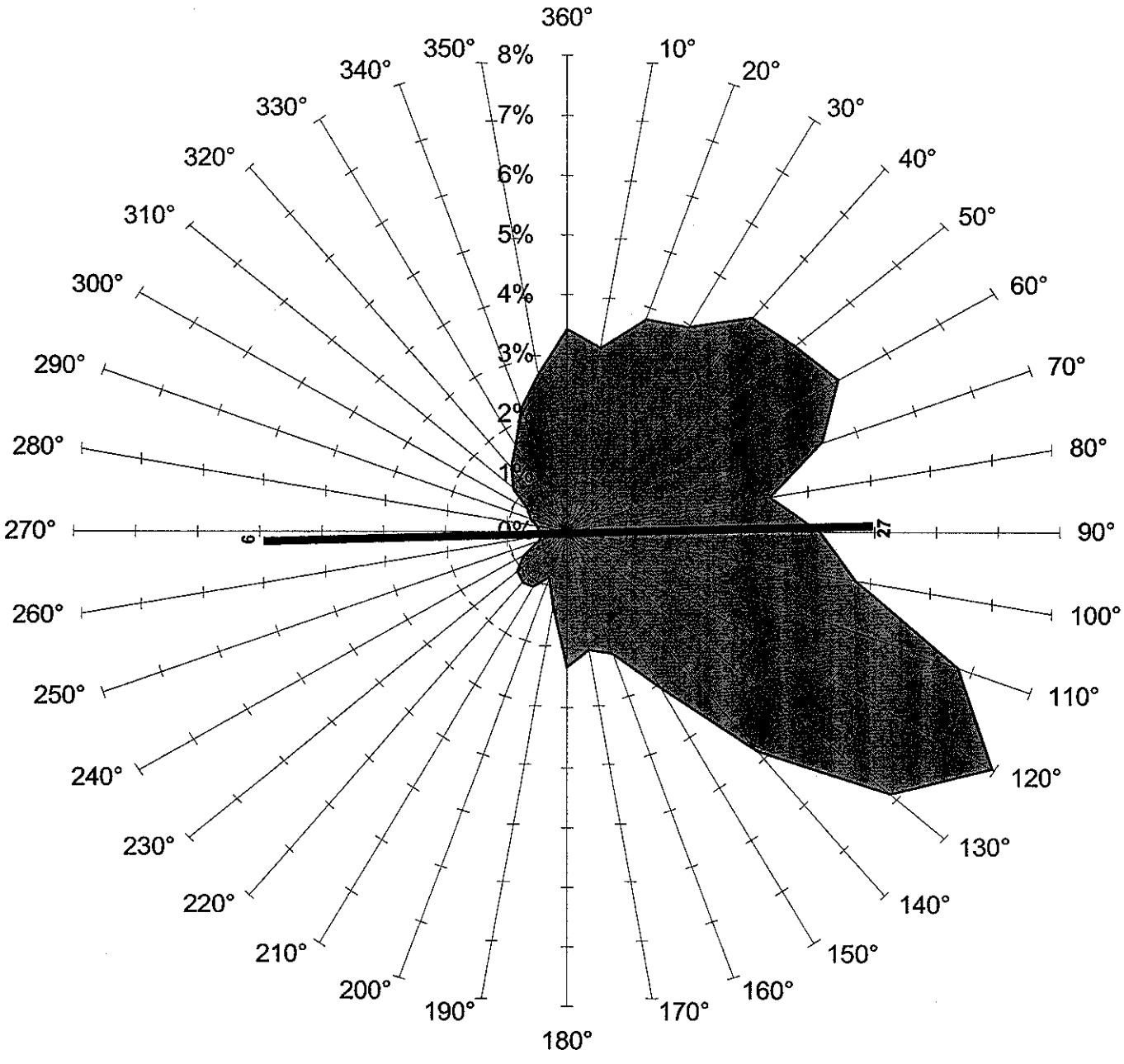
ANNUAL ALL WEATHER WIND PERSISTENCY CHART

FIGURE: 1.10

GRAPHICS\KEYWEST\MARATHONAP-FIG_1-10_1-12_AW-IMC-VMC.AI



Source: NOAA National Climatic Data Center, Ashville, N.C.
Station: 72201 Key West, Florida
Period of Record: 1991-2000
Compiled by URS Corporation, 2001

Wind Data depicted relative to true north (NAD 83)
Runway 9 Orientation: 89°23' 26"
Runway 27 Orientation: 269°23' 48"

Notes:

This graphic depicts the percentage of time that the wind was recorded as occurring from each compass heading (excluding calm conditions) during the period 1991 to 2000.

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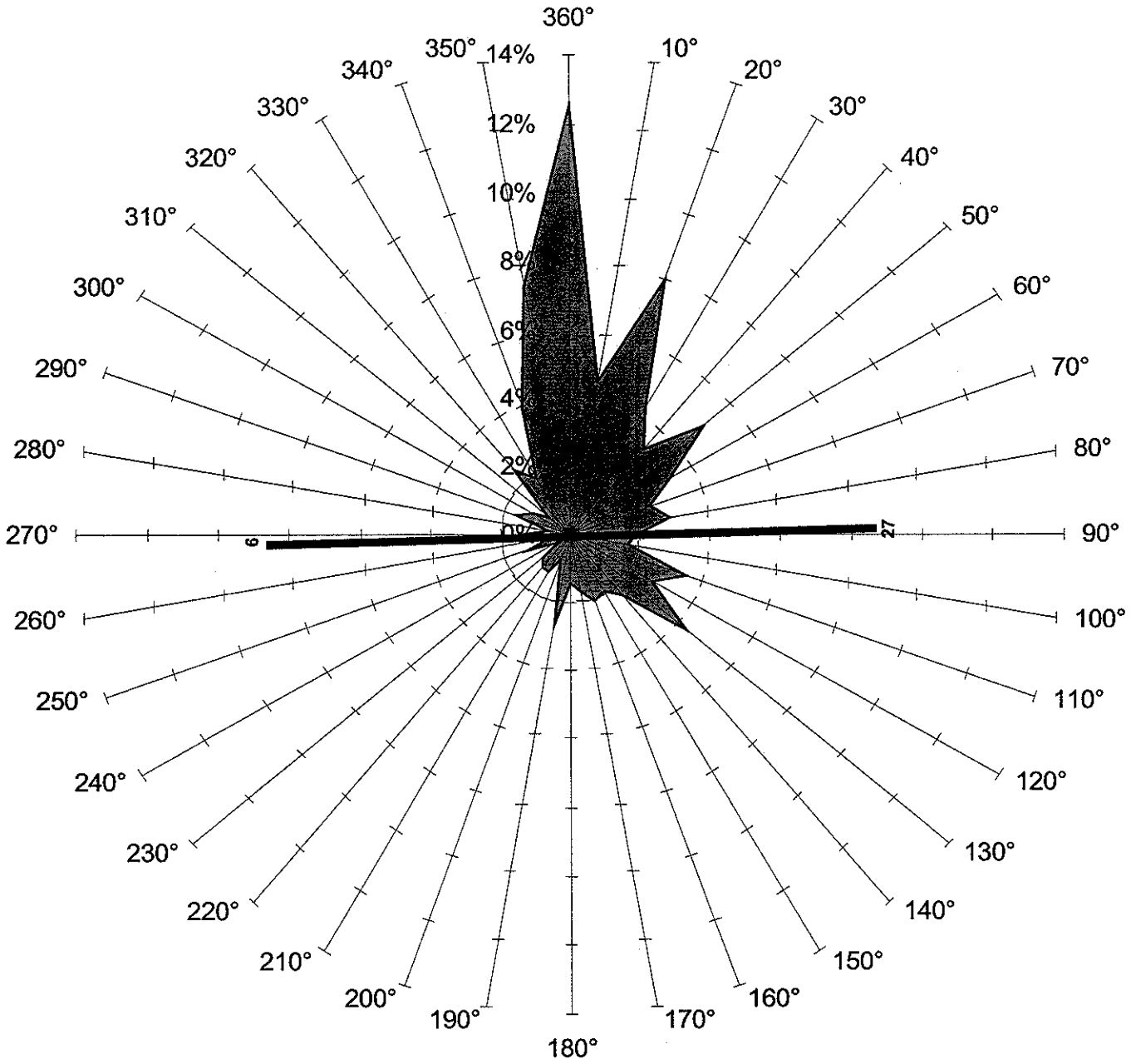
VMC ANNUAL WEATHER WIND PERSISTENCY CHART

FIGURE: 1.11

GRAPHICS\KEYWEST\MARATHON\AP-FIG_1-10_1-12_AW-IMC-VMC.AI



Source: NOAA National Climatic Data Center, Ashville, N.C.
Station: 72201 Key West, Florida
Period of Record: 1991-2000
Compiled by URS Corporation, 2001

Wind Data depicted relative to true north (NAD 83)
Runway 9 Orientation: 89°23' 26"
Runway 27 Orientation: 269°23' 48"

Notes:

This graphic depicts the percentage of time that the wind was recorded as occurring from each compass heading (excluding calm conditions) during the period 1991 to 2000.

Key West International Airport
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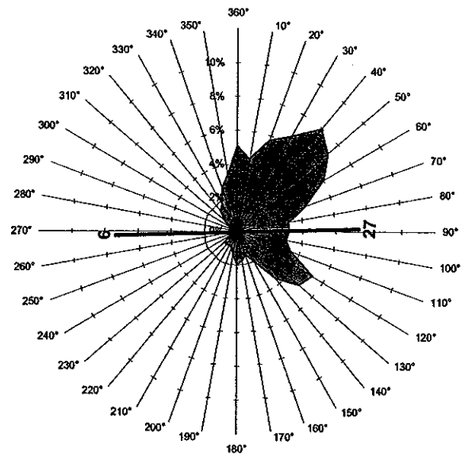
IMC ANNUAL WEATHER WIND PERSISTENCY CHART

FIGURE: 1.12

GRAPHICS\KEYWESTMARATHONAP-FIG_1-10_1-12_AW-IMC-VMC.AI

JANUARY



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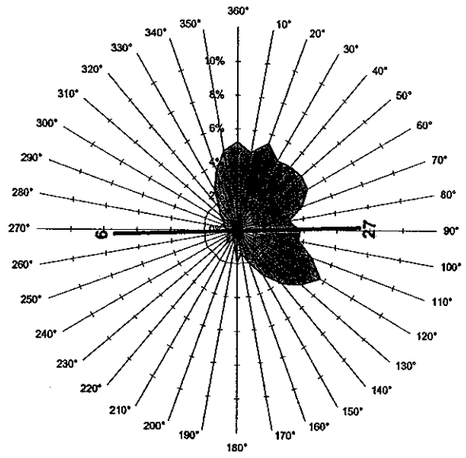

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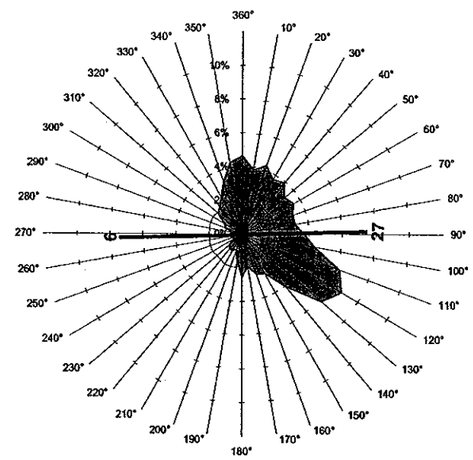

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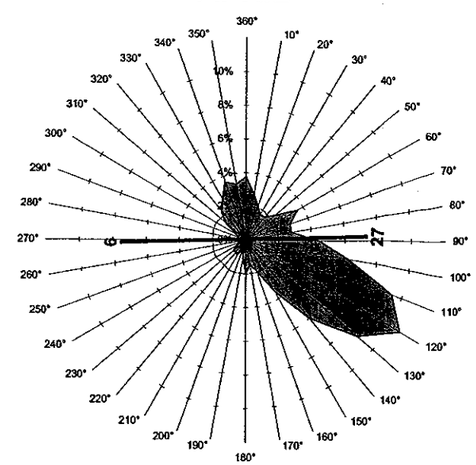
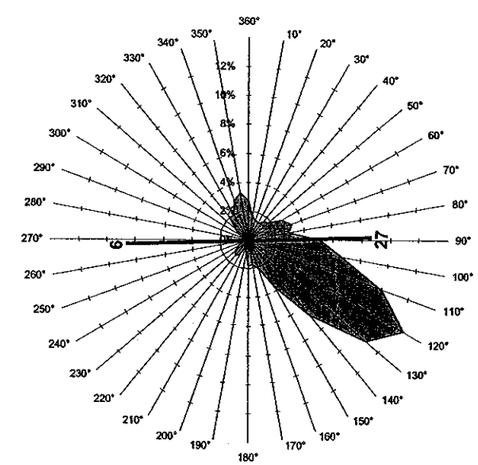
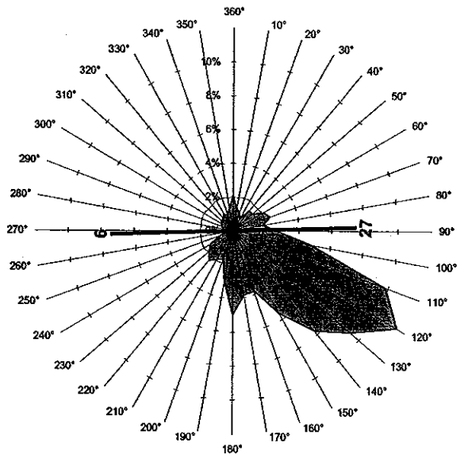


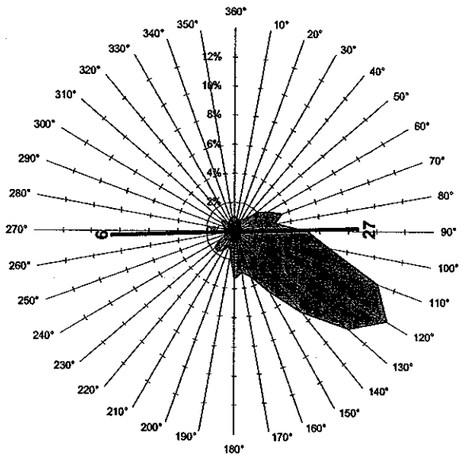
MAY



JUNE



JULY



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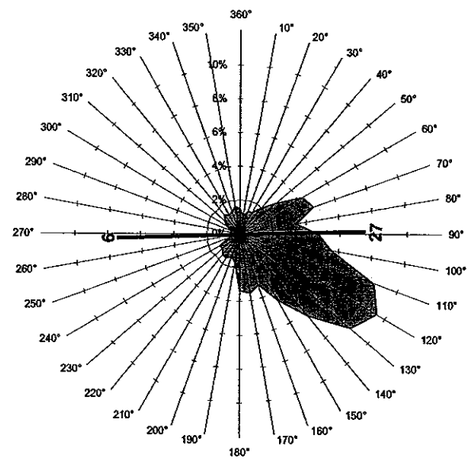

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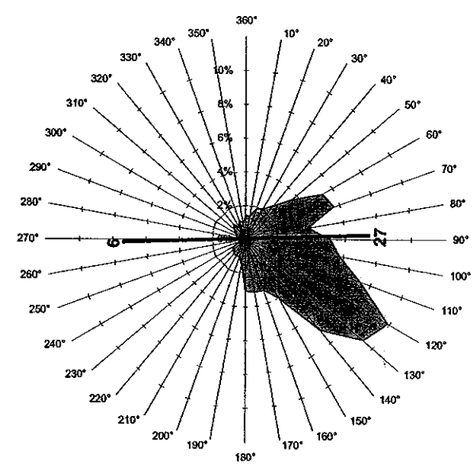
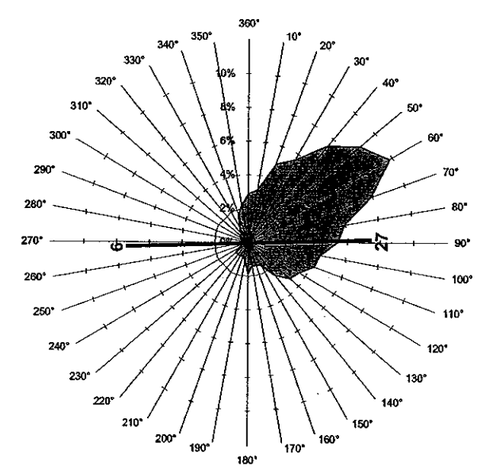


OCTOBER



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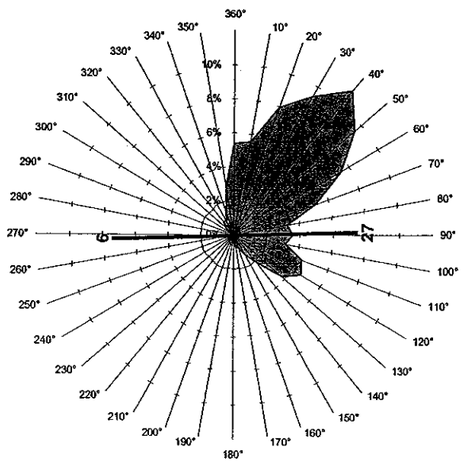
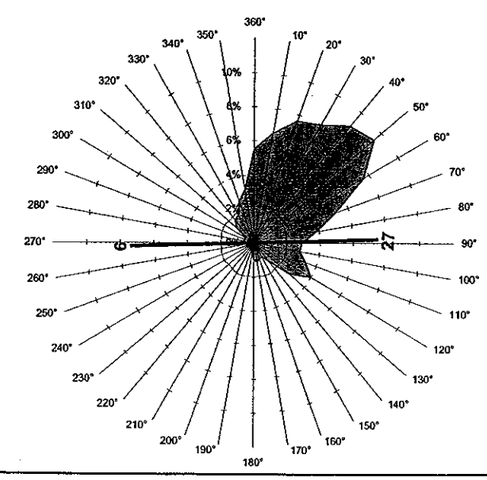


DECEMBER



Source: NOAA National Climatic Data Center, Ashville, N.C.
Station: 72201 Key West, Florida
Period of Record: 1991-2000
Compiled by URS Corporation, 2001

Wind Data depicted relative to true north (NAD 83)
Runway 9 Orientation: 89°23' 26"
Runway 27 Orientation: : 269°23' 48"

Notes:

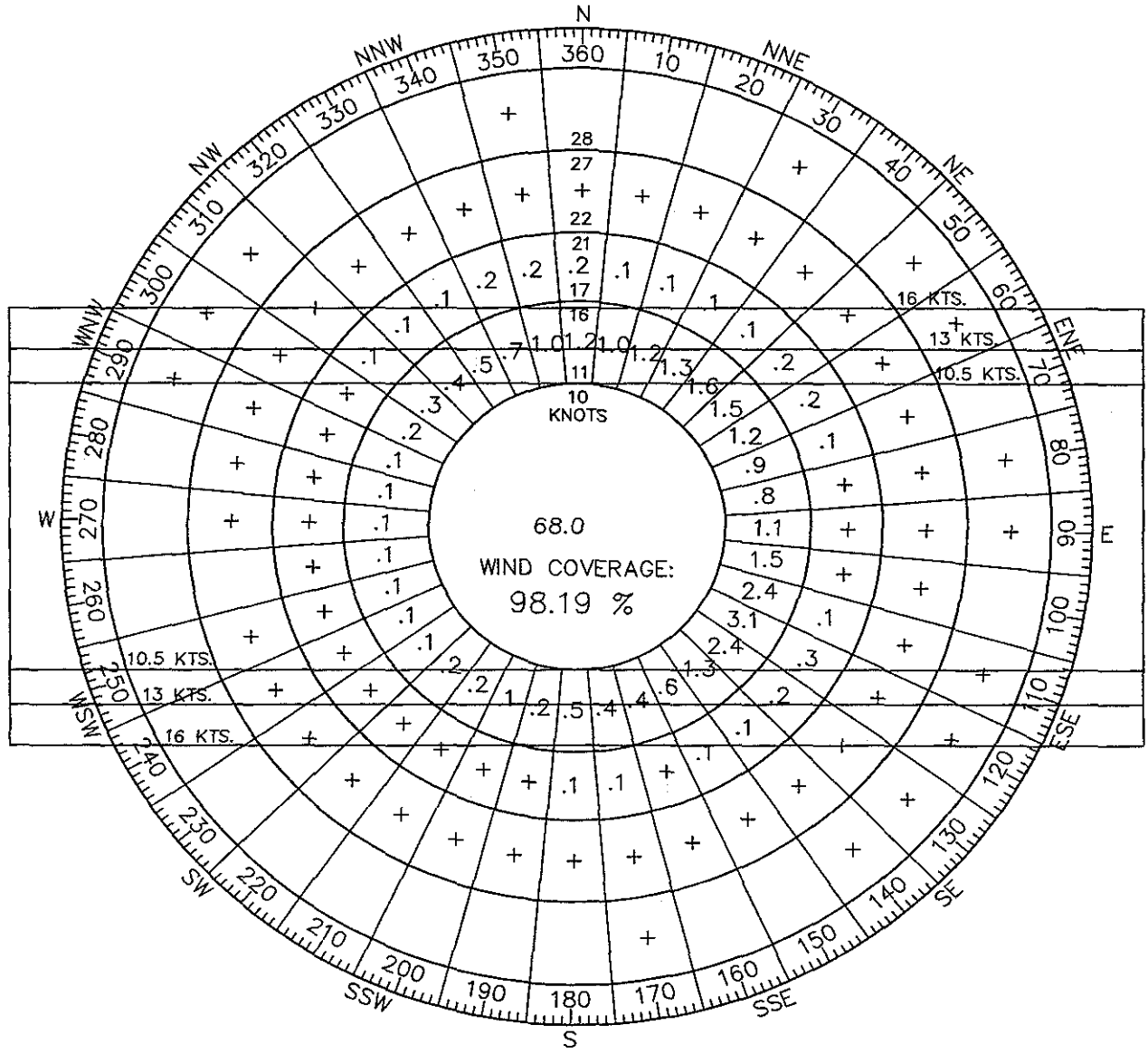
This graphic depicts the percentage of time that the wind was recorded as occurring from each compass heading (excluding calm conditions) during the period 1991 to 2000.

KEY WEST INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

MONTHLY ALL WEATHER WIND PERSISTENCY CHART

FIGURE 1.13



SOURCE: NOAA NATIONAL CLIMATIC DATA CENTER, ASHVILLE, N.C.
STATION: 72201 KEY WEST, FLORIDA
PERIOD OF RECORD: 1991–2000

URS CORPORATION, AUGUST 2001

NOTES:

1. THIS CHART PLOTS, FOR THE DATA PERIOD, THE RECORDED OCCURENCES (IN PERCENT) OF WIND BY DIRECTION AND SPEED WHILE THE RECTANGULAR BOXES REPRESENT THE MAXIMUM ACCEPTABLE CROSSWIND COMPONENT FOR EACH RUNWAY. THE WIND COVERAGE CAPABILITY OF THE AIRFIELD IS THUS DETERMINED BY TOTALING ALL OCCURENCES FALLING WITHIN THE RECTANGLES.

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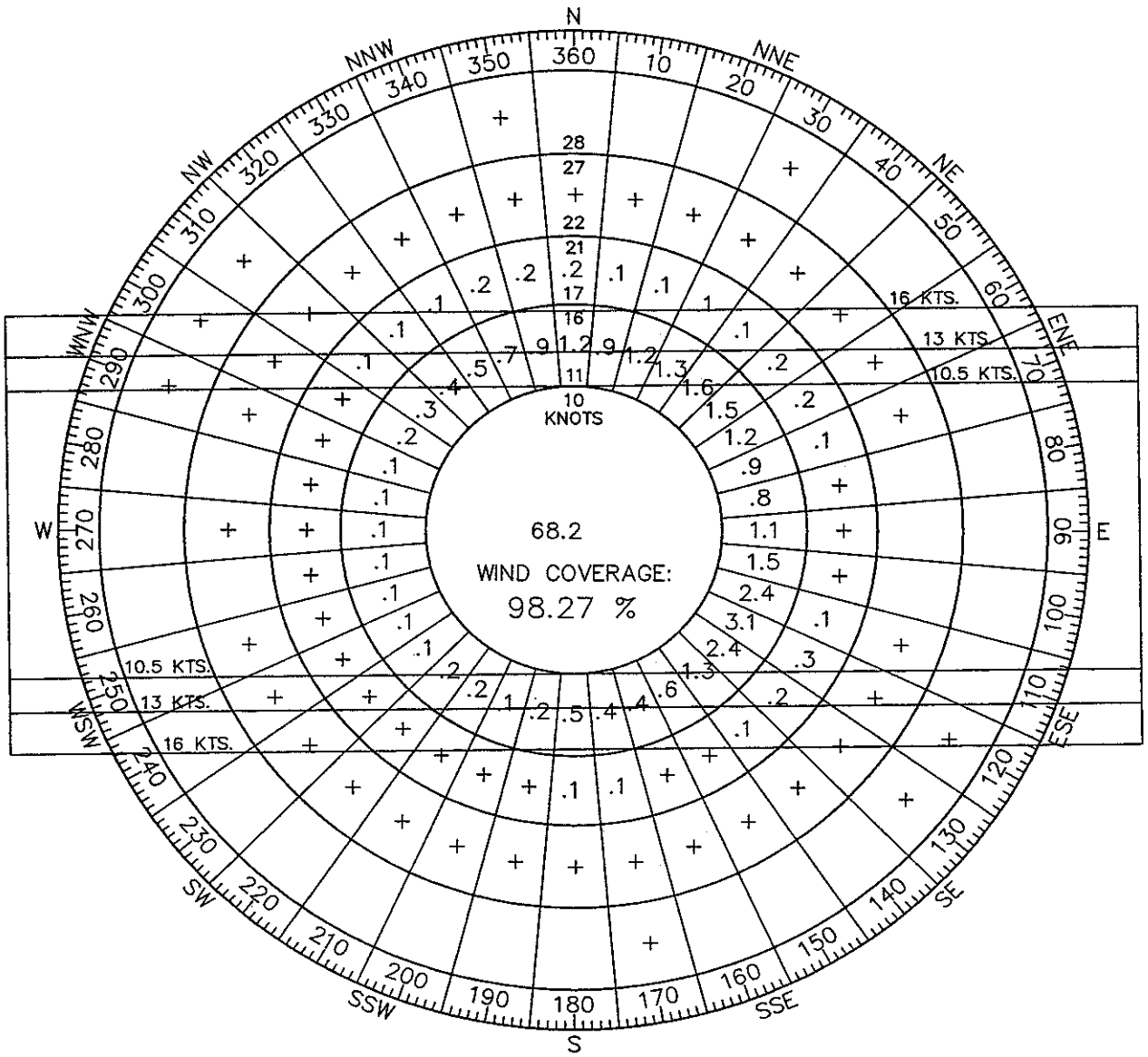
ALL WEATHER WIND ROSE

FIGURE: 1.14

J:\KEY WEST\MASTER PLAN UPDATE\EXHIBITS\FIG 1.14.DWG 03/13/03 15:27



SOURCE: NOAA NATIONAL CLIMATIC DATA CENTER, ASHVILLE, N.C.
STATION: 72201 KEY WEST, FLORIDA
PERIOD OF RECORD: 1991–2000

URS CORPORATION, AUGUST 2001

NOTES:

1. THIS CHART PLOTS, FOR THE DATA PERIOD, THE RECORDED OCCURENCES (IN PERCENT) OF WIND BY DIRECTION AND SPEED WHILE THE RECTANGULAR BOXES REPRESENT THE MAXIMUM ACCEPTABLE CROSSWIND COMPONENT FOR EACH RUNWAY. THE WIND COVERAGE CAPABILITY OF THE AIRFIELD IS THUS DETERMINED BY TOTALING ALL OCCURENCES FALLING WITHIN THE RECTANGLES.

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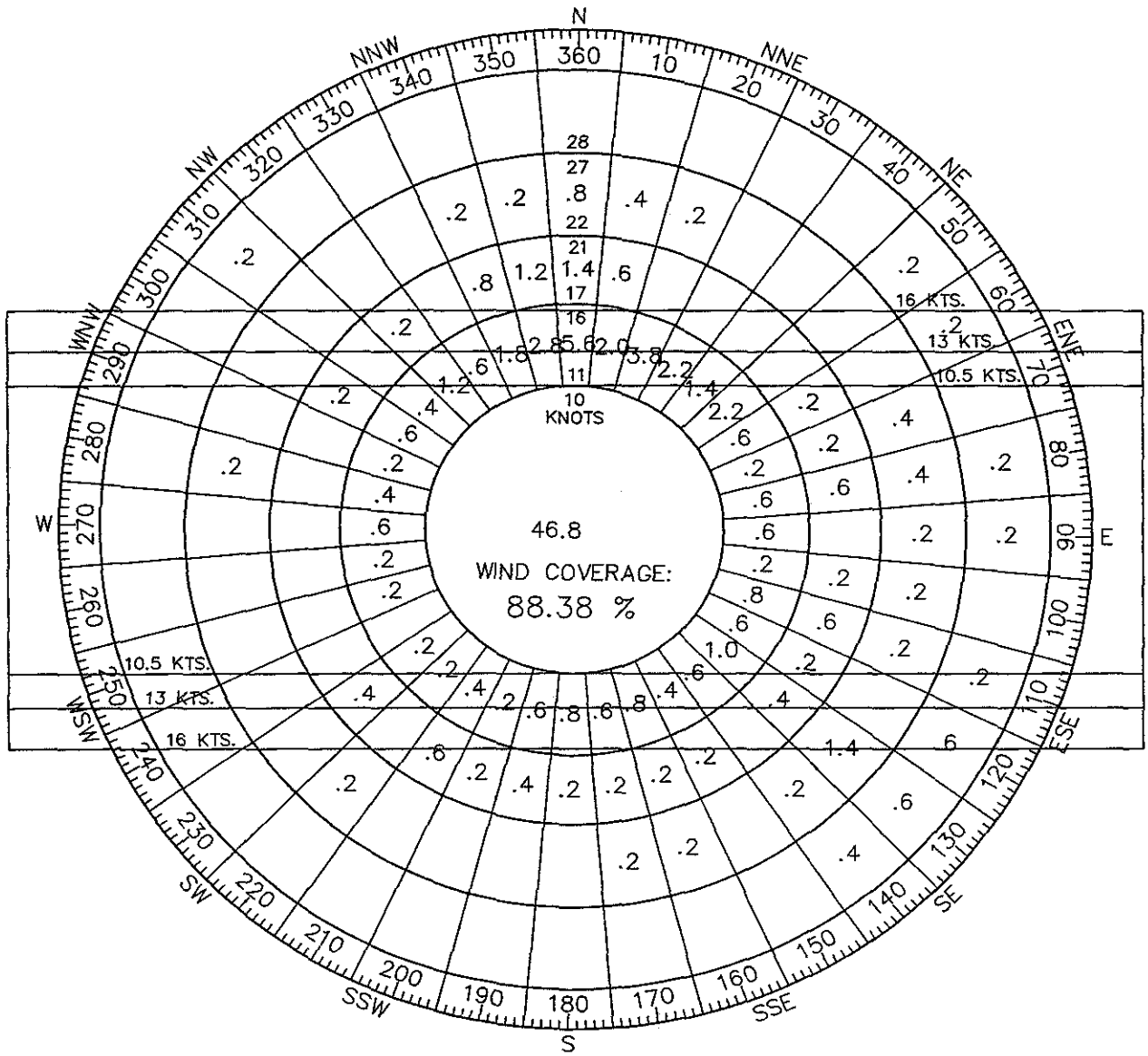
VISUAL METEOROLOGICAL CONDITION WIND ROSE

FIGURE: 1.15

J:\KEY WEST\MASTER PLAN UPDATE\EXHIBITS\FIG 1.15.DWG 03/13/03 15:31



SOURCE: NOAA NATIONAL CLIMATIC DATA CENTER, ASHVILLE, N.C.
STATION: 72201 KEY WEST, FLORIDA
PERIOD OF RECORD: 1991–2000

URS CORPORATION, AUGUST 2001

NOTES:

1. *THIS CHART PLOTS, FOR THE DATA PERIOD, THE RECORDED OCCURENCES* (IN PERCENT) OF WIND BY DIRECTION AND SPEED WHILE THE RECTANGULAR BOXES REPRESENT THE MAXIMUM ACCEPTABLE CROSSWIND COMPONENT FOR EACH RUNWAY. THE WIND COVERAGE CAPABILITY OF THE AIRFIELD IS THUS DETERMINED BY TOTALING ALL OCCURENCES FALLING WITHIN THE RECTANGLES.

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INSTRUMENT METEOROLOGICAL CONDITION WIND ROSE

FIGURE: 1.16

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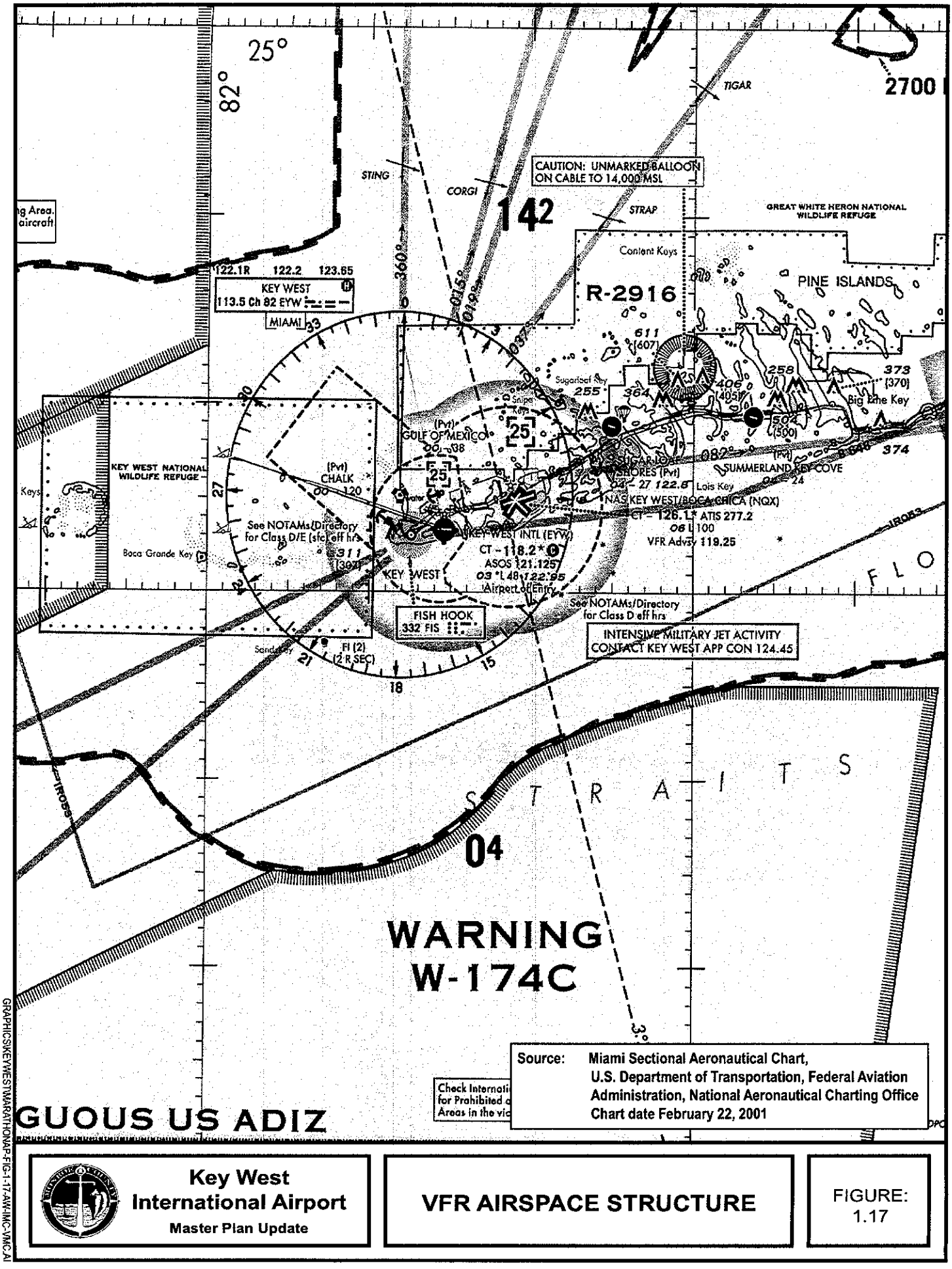

Source: Miami Sectional Aeronautical Chart, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office
Chart date February 22, 2001

Key West International Airport
Master Plan Update

VFR AIRSPACE STRUCTURE

FIGURE: 1.17

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